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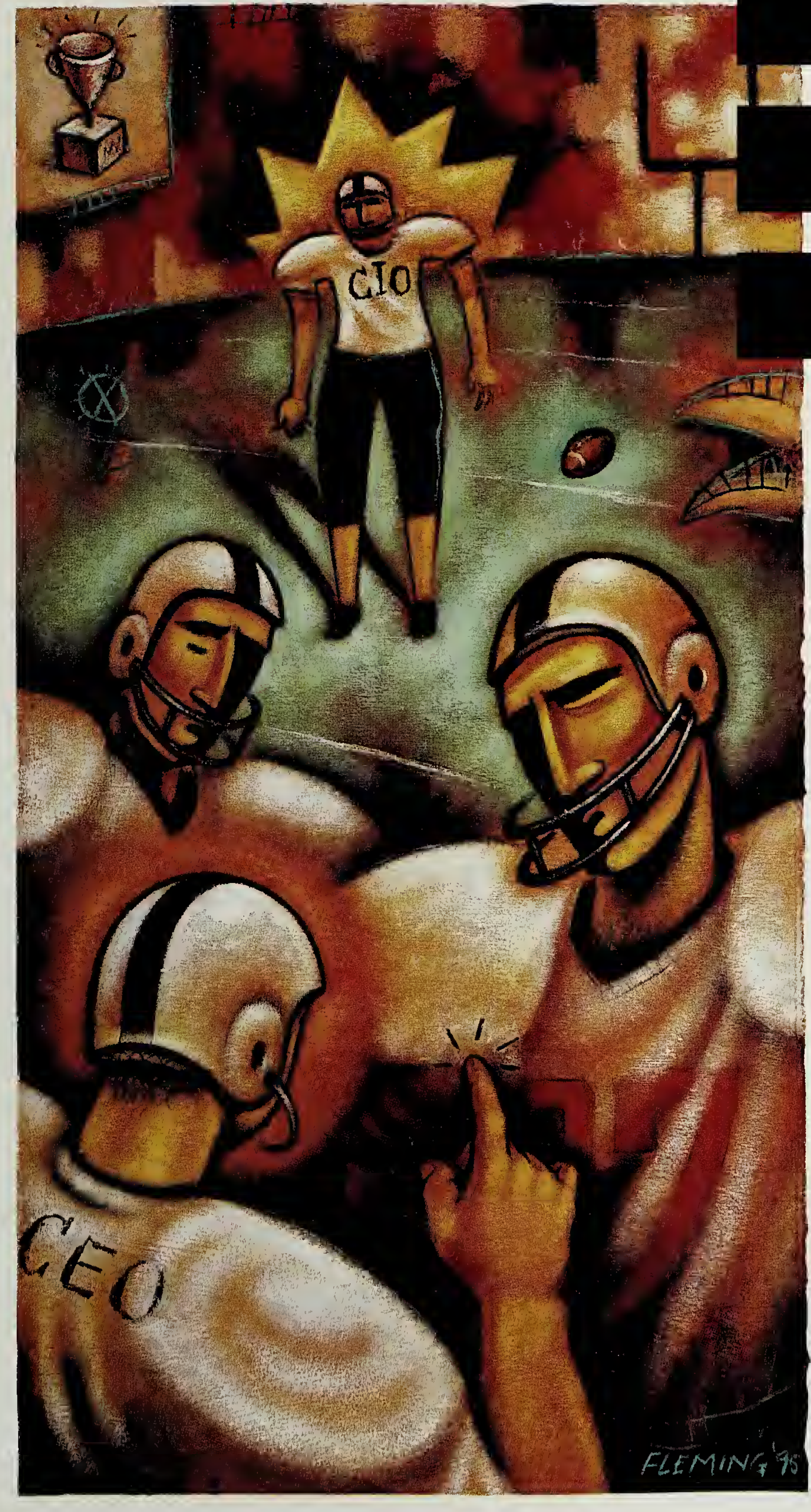


The New CIO/CEO Partnership

KNOWLEDGE MANAGEMENT IS A PREREQUISITE FOR COMPETING IN THE INFORMATION AGE. IT'S ALSO AN OPPORTUNITY FOR THE CIO TO GET OFF THE BENCH AND INTO THE HUDDLE.

BY HARRY M. LASKER
AND DAVID P. NORTON

In today's rapidly changing business climate, corporate leaders must be ready to adopt new approaches to align **information technology** strategies with overall organizational strategies. The CIO can play a crucial role.

The old model, which focused on using IT to cut costs by improving transaction processing performance and other data flows, has reached the point of diminishing returns. As companies move further into the Information Age, using IT to convert knowledge into revenue has more value than deploying more processors to further reduce transaction processing costs — it also has implications for the chief information officer's future.

Improving the economics of an organization comes from a shift in performance — that is, the ability to do new things or do old things better. For instance, currency traders with the most up-to-date information and insights will outperform less well-informed investors. Accumulated corporate know-how is the basis for performance, and improving performance is a function of learning.

Managing knowledge and learning is based on three principles:

- **Alignment**. Don't map the knowledge-creation process of your organization until you can link it to your business strategy or the performance that pushes that strategy.
- **Forward thinking.** Improving performance means developing new core competencies that do not exist inside the company today but must be learned.
- **Communication.** Learning is a social activity, and reaching new performance levels requires greater communication across the organization.

IT is key to addressing all three principles, and the CIO is in a position to play a critical role. His job is made easy because rarely will he have to battle for additional resources. Up to 90% of the infrastructure required for knowledge management already is in place in most organizations in the form of existing networks and servers. Therefore, only a small shift in the IT budget is required, usually less than 5%.

One such resource shift involves creating user-friendly interfaces that encourage employees to share information across the network. By formalizing the collection and dissemination of information, a company can create a learning loop. (See "Inside a Learning Loop" on facing page.) Captured information might include such things as changes in customer strategies, rumors of a new competitor in the market, or a trade-press article describing a new regulatory threat.

A major battle the CIO faces is to win the respect and cooperation of other senior managers. Often perceived as a latecomer to the game, he must defend his ideas for planning and implementing an enterprise-wide

Illustrations by Joe Fleming

knowledge management strategy. For example, the elaborate securities trading systems at many financial institutions are almost always outside the development and control of the CIO. The CIO must convince his peers and the CEO that he alone is in a position to ensure that the system works across the entire enterprise and is capable of growing and adapting.

A case in point: This month, Ron Ponder, AT&T Corp.'s CIO, assumes responsibility for the telephone company's business- and consumer-customer service departments. The change is due in part to a recognition by top management of the role that IT plays in managing knowledge for customer service. Ponder and other managers currently are weighing ways to extend knowledge management throughout the rest of the corporation.

Another company that is evolving knowledge management capabilities is CIGNA Property & Casualty. Both AT&T and CIGNA understand the role IT — and the CIO — plays in the relationship between knowledge and performance.

Case Study: AT&T

As part of its recent re-engineering efforts, AT&T's Business Communications Services (BCS) division in Bedminster, N.J., last month rolled out a knowledge management system to personalize customer service. BCS personnel now use an on-line help system to provide faster and more customized service. The system includes a sophisticated interface and advanced middleware that allows a customer service associate to access information from mainframe systems and integrates desktop tools, such as fax, imaging and word processing.

For example, when a customer calls with a question about a telephone bill, a customer service associate immediately can go into the business module, click on billing and find a menu of activities to choose from to resolve the problem. An internal World Wide Web site — or intranet — provides the network foundation that integrates customer information, according to Gene Speicher, division manager of AT&T's BCS Customer

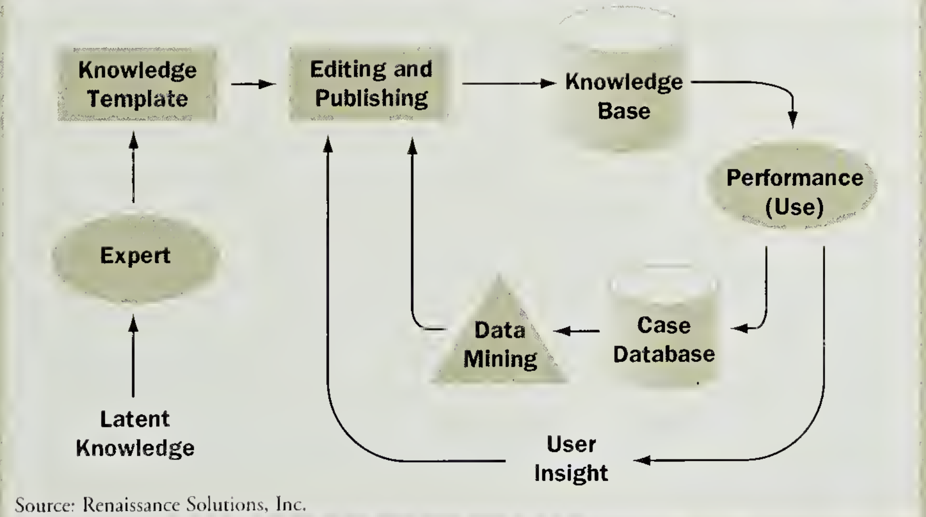
INSIDE A LEARNING LOOP

Organizations mobilize learning and create knowledge by developing processes for collecting and assimilating information, assessing its value and applying it to the processes of the company. This results in cycles called learning loops. Learning loops allow for rapid feedback and behavior modifications and immediately affect future performance. The corporate knowledge base thus expands, and "smart" companies with "smart" processes emerge.

In the example illustrated here, an "expert" in the field submits an observation or fact that directly relates to the performance of the unit. It is reviewed by internal editors, usually senior officials with a background in the particular area. They then pass the usable information to publishers — individuals with the authority to determine policy — who then approve distribution of the information into a database for use by others. Published information is then refined by those who use it and describe the impact of that information.

Here's how the process works in the insurance industry. Say a claims agent working with chemical industry clients realizes that several injuries all seem to be related to the use of a new solvent. The material leaves an invisible residue that diminishes the lubricating effect of certain plastics and damages equipment if it is not used properly.

The claims agent submits this observation to the knowledge management network. An underwriter-editor then recognizes, from routine reports filed by sales agents, that other clients also use the new solvent. In addition, the underwriter-editor determines that the manufacturer of the solvent also is a client. The editor alerts a supervisor-publisher, who distributes an alert to the solvent manufacturer's salespeople as well as to other sales staff and claims agents.



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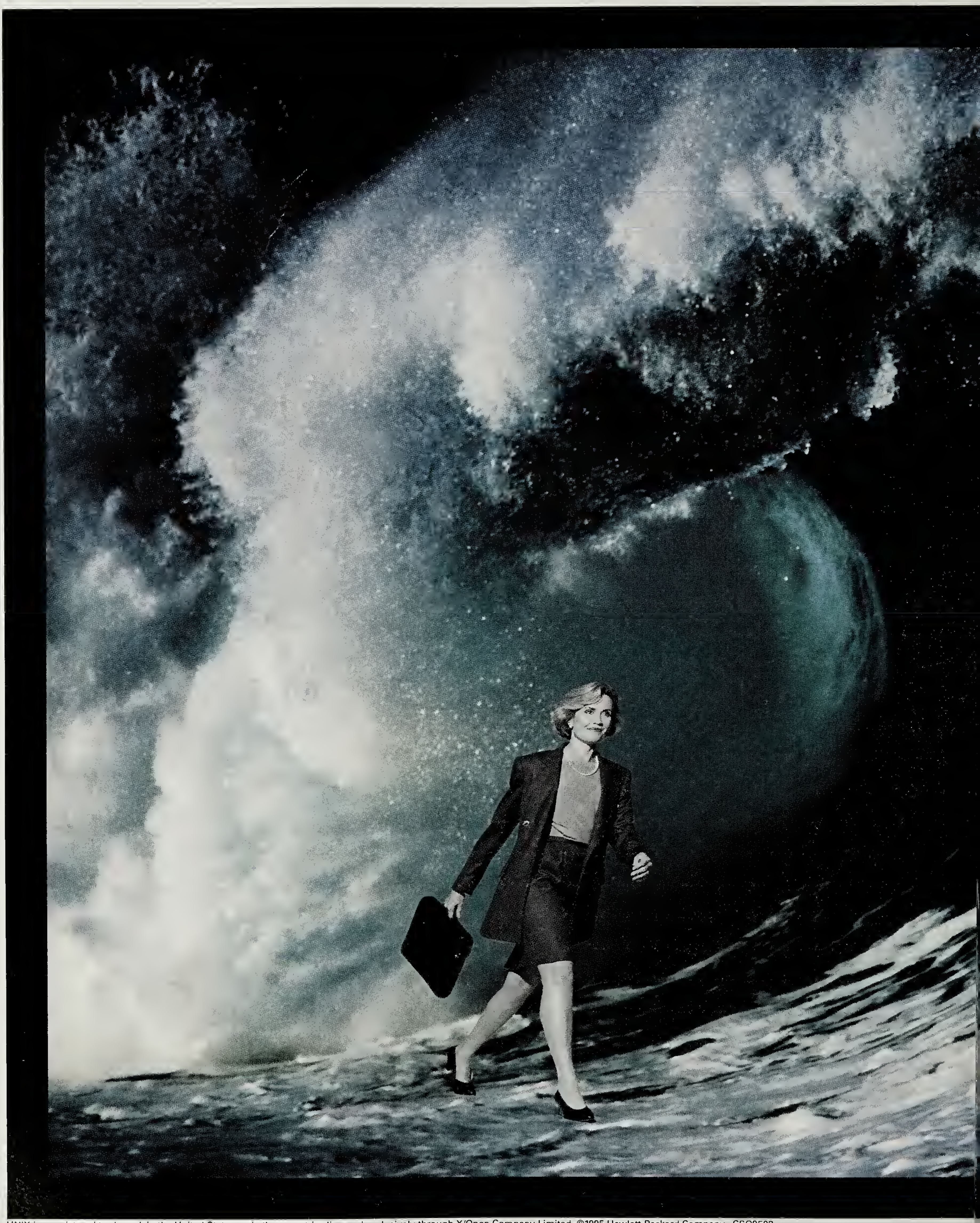

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Care unit. The network allows the associate to look up the bill and the disputed call and to determine whether the customer made the call or not, in part based on an analysis of prior calling history and other factors. The system guides the associate through the job by providing on-line help for various service scenarios.

Previously, AT&T's employees did not have access to information about customer problems, company policies and other relevant data when they were on the telephone with a customer because the information was dispersed across multiple systems and even paper manuals. The new client/server desktop application cuts across the old systems to deliver a more comprehensive picture of a client's situation on the associate's screen.

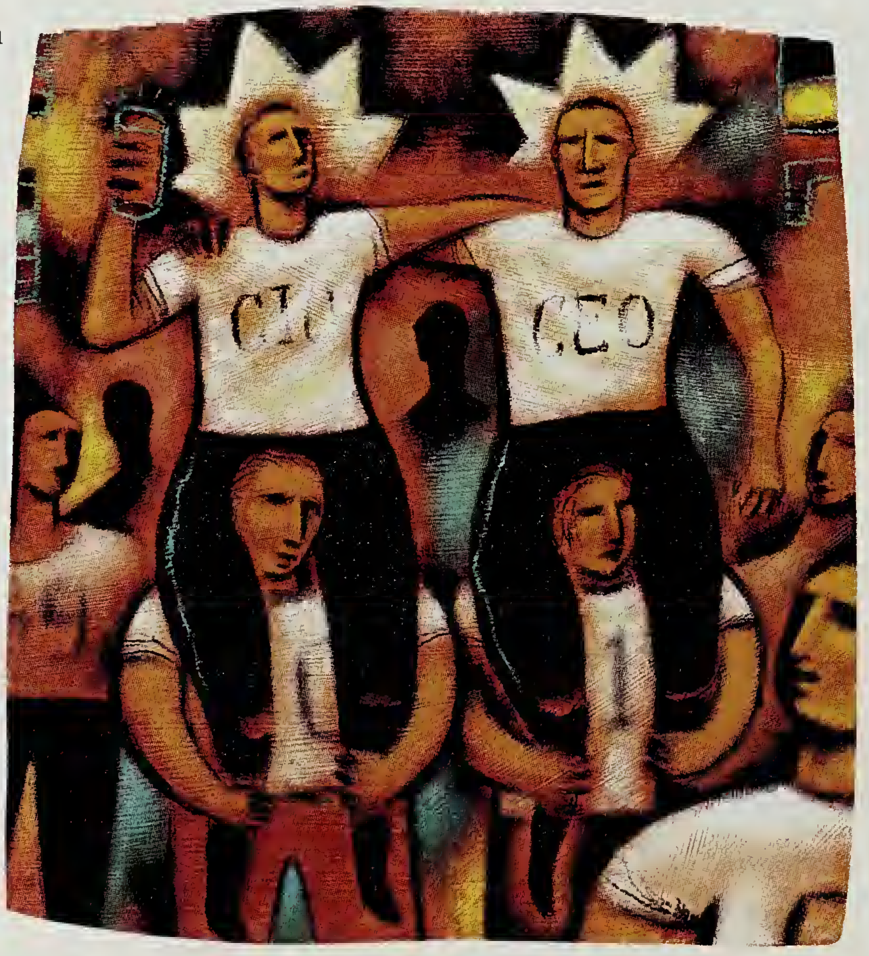
"Before, information was so fragmented and split up in stovepipes, it was hard for the customer service staff to build a relationship with a customer," notes Jan Scites, AT&T vice president, BCS Customer Service. "Now we have the ability to make changes quickly, and it expands the scope of their jobs."

CIGNA FOUND THAT QUALITY, NOT QUANTITY, OF INFORMATION IS KEY TO PROFITABLE UNDERWRITING.

One result of better knowledge management is that AT&T customer service associates see the potential for radically improving response times to customers. According to Speicher, the system improves productivity by mechanizing the steps that previously were less automated.

In the past, customer service associates had to access multiple on-line and manual information sources to determine the right way to proceed with problem resolution; now, that is all mechanized with the new on-line help facility.

As AT&T has found, once the tools are in place, a learning loop develops quickly. Customer service representatives, field sales agents, maintenance crews and others who are in direct contact with customers, competitors and other internal departments contribute their insights and observations through the intranet to their managers. The managers then review and "edit" the submitted information and "publish" the insights on a knowledge database for use by others in the organization.



Case Study: CIGNA

Of course, getting people to share information willingly is one of the most difficult aspects of knowledge management. "You have to create an upward spiral for know-how to be shared," says Tom Valerio, senior vice president, transformation, at CIGNA Property & Casualty, a Philadelphia-based insurance company.

In an upward spiral, knowledge and information contributed by employees is processed by "knowledge editors" — such as experienced underwriters and other senior officials — who distribute it across the organization. For instance, senior underwriters might gather data from the field offices and broadcast relevant information to associates and superiors over CIGNA's internal network.

"If you can create a learning loop, where you're constantly creating and accessing individual knowledge, and if you have the right infrastructure, you're creating organizational know-how," Valerio says. "As the individual's know-how improves, so does his performance."

Exploiting knowledge management is critical for CIGNA. In 1993, it lost more than $250 million. It has rebounded — in the third quarter of 1995, the company had a pretax profit of $60 million — partly because knowledge management is an element of a re-engineering effort. As a result of re-engineering, CIGNA's management reorganized the company from a general commercial carrier to an insurance specialist.

CIGNA uses knowledge

management to discover and maintain profitable niches. The skills and experience of its people in underwriting and claims have become the building blocks of the new CIGNA. Their knowledge is being used to determine which niches to enter and to what extent. "Knowledge held by the individual worker is one of the most critical components to CIGNA's new strategy," Valerio notes.

The insurance company began the knowledge management process by developing a performance model for underwriters. A performance model identifies the types and sources of knowledge required for completion of any step in a process. The CIGNA model systematized the key steps in the process of reviewing an application for insurance. Once CIGNA had determined that there were 29 key steps in the underwriting process, it was able to link specific databases to specific steps. For instance, government data on workplace injuries could be linked to the step that requires collecting accident history for the industry segment of a prospective customer.

Most of the CIGNA employees who collect and disseminate information — the editors and publishers — are underwriters. They are both knowledgeable about the industry and have the time and tools to work with the information. They process information submitted by sales agents, claims agents and others in the organization and then distribute it via the client/server network throughout the company, thus creating a learning loop.

The company found that the quantity of information was not the key determinant of profitable underwriting. Rather, it was the quality of the information. "Every company has a ton of information in its databases," Valerio notes. "The key to profitable underwriting isn't giving access to every bit of information that's important, it's how you determine which information is relevant and how you tailor it."

IT has been important to CIGNA's transformation. The company has a CIO for the corporate entity, and each division has an information systems officer, or DISO. The DISO of the property and casualty unit was a participating member on the executive steering committee that managed the major project initiatives, and the DISO staff was involved directly in the knowledge management initiatives.

In addition, the DISO sponsored the technology for each of the company's three major initiatives: producer relations, underwriting and claims management. The CIO reviewed the ways technology was being used in each of these three areas.

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The CIO's Challenge

Knowledge management can offer CIOs and CEOs an opportunity to forge a new relationship by focusing on their complementary roles in implementing the knowledge management system. The considerable technology assets most companies have in place can be used to promote learning and boost performance. With the right interfaces, the desktop and the network allow employees to be the "eyes and ears" of the organization, plugged into a multitude of learning loops.

However, the CIO must recognize that the IT department cannot control the knowledge infrastructure. Instead, he should set his sights on becoming a senior partner in the knowledge management process. At both CIGNA and AT&T, the IT organization is intimately involved in knowledge management.

The CIO's role is to build the infrastructure and to develop the interfaces that support the free flow of knowledge. If he embraces the opportunity, he will earn a place in the huddle. If he resists, the IT department is destined to play a supporting, rather than a strategic, role in the company's future.

It's decision time for CIOs. ◆

Additional reading

Harvard Business School case study (N1-195-228) on CIGNA's knowledge management program, "CIGNA Property and Casualty Re-engineering (A)," by Richard L. Nolan and Donna Stoddard, June 1995.

"Mapping Corporate Brainpower" by Thomas A. Stewart, *Fortune,* October 30, 1995.

"Getting Real About Brainpower," by Thomas A. Stewart, *Fortune,* November 27, 1995.

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